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Werner Stockum

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EXAMINER

NGUYEN, HUNG D

ART UNIT

PAPER NUMBER

4118

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,771	Applicant(s) STOCKUM ET AL.	
	Examiner HUNG NGUYEN	Art Unit 4118	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/9/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/9/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant case, the abstract is objected to because it appears to use such phrases which can be implied and does not describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. A new abstract is suggested.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-12 are considered omnibus type claims and indefinite in that the claim fails to point out what is included or excluded by the claim language. For examples:

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In claim 1, there is unclear for the recitation of the term “use” noted in line 3. It is unclear whether claim 1 intended to recite the use of a laminate layers structure where such layers are welded together using a laser light or using the laser for marking or inscription on plastics. Claim 1 is intended to be a process, however, the claim appeared to be incomplete for omitting essential steps or essential elements or structural cooperative relationships of elements, such omission amounting to a gap between the steps, elements, or amounting to a gap between the necessary structural connections. See MPEP § 2172.01. As best understood by the examiner, perhaps there is only one welding step by a laser light was intended for claim 1. Furthermore, there is insufficient antecedent basis for “the permanent and abrasion-resistant coloured inscription or marking” recited in the preamble of claim 1. The term “coloured” should be read as “color” for proper US English. It is also unclear if applicant's intention is for permanent and abrasion-resistant colored inscription” in plastics or “marking” since both are not the same or equivalent to one another. The phrase “in that use is made of a layer system” is vague and can not be clearly understood. Does applicant means such “use” is a layer system or the use of a layer system? All of the alternative recitations, for example, “first layer consists of a plastic which comprises an energy absorber intrinsically or as a layer” are considered either improper alternative or considered as a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim), since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c).

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Claim 2 recites "the first layer is composed of one or more support layers" (lines 1-2 and then later recites "the energy absorber is located on or between these support layers" (lines 2-3) in which such alternative is considered improper as it renders the claim indefinite because if the first layer is composed of one layer as chosen, there is no "these layers".

The recitation of "and/or" in line 3 and "or" in line 5 renders the claim indefinite for improper alternative format. The phrase "and/or" is clearly indefinite per se (also note in claims 7, 10).

4. Regarding claim 5, the phrase "essentially consists of and optionally...." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase "optionally" are part of the claimed invention and to the contrary, if there is "essentially consists", then why there is latter "optionally" since "optionally" is clearly included "not essentially. See MPEP § 2173.05(d).

5. Claim 9 is also indefinite since there is no sufficient antecedent basis for "said polymers" recited on line 4. The polymer component recited in the alternative format as noted is very confused and unclear. Such alternative format is improper.

6. There is insufficient antecedent basis for "the polymer component fraction" recited at line 3 of claim 11.

7. Claim 12 is a product by process so it is still a product, i.e., plastics. Since there is unclear whether there is "laser-marked" or "laser-inscribed" in the process claim 1 (i.e., only the polymer component welded under the action of laser light), it appears that

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claim 12 is directed to simply plastics or a plurality of plastics where the claimed scope is clearly uncertain.

In general, the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. As set forth above, Claim 1 provides for the use of “use is made of a layer system” as noted on line 2-3, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

9. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, 5, 7, 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Koops et al. (US Pat. 7,371,443).

11. Regarding claim 1, Koops et al. discloses the process for the permanent and abrasion-resistant colored inscription or marking of plastics, consisting of two layers 1 and 3 (Fig. 1) lying one on top of the other and separated by a support film 2 (Fig. 1), where the first layer 1 (Fig. 1) consists of a plastic which comprises an energy absorber intrinsically or as a layer, and the second layer 3 (Fig. 1) applied to a support film 2 (Fig. 1) serves as inscription medium and comprises a colorant and a polymer component (Col. 10, Lines 24-19) where the polymer component is welded to the plastic surface (Col. 3, Lines 42-50) under the action of laser light 10 (Fig. 2) (Col. 10, Lines 45-46) during the inscription/markings.

12. Regarding claim 2, Koops et al. discloses the first layer is composed of one or more support layers 2 & 5 (Fig. 1), and the energy absorber 3 (Fig. 1) is located on or between these support layers.

13. Regarding claim 5, Koops et al. discloses the inscription medium essentially consists of colorants (3 & 4 Fig. 2 are pigments layers).

14. Regarding claim 7, Koops et al. discloses the inscription medium (same as pigment layer) comprises the polymer component in dissolve in amount of 30-90% by weight (Col. 5, Lines 44-45).

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15. Regarding claim 9, Koops et al. discloses the polymer component consists of polyesters, vinyl polymers, polyamides, polyacetals, copolymers, vinyl acetate, copolymers (Col. 3, Lines 42-50).

16. Regarding claim 11, Koops et al. discloses the inscription medium comprises 0.1-10% by weight of colorants, based on the polymer component fraction (Col. 7, Line 7 to Col. 8, Line 6).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 3, 6, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koops et al. (US Pat. 7,371,443) in view of Delp et al. (US Pub. 2004/0013969).

19. Regarding claim 3, Koops et al. discloses all the claimed features as set forth above except for the energy absorber is selected from the group consisting of carbon, metal oxides, silicates, SiO₂ flakes, metal oxide-coated mica and/or SiO₂ flakes, conductive pigments, sulfides, phosphates, BiOCl, anthracene, perylenes, rylenes, pentaerythritol, or mixtures thereof in the manner recited in claim 10. Delp et al. teaches the laser-markable plastics where the laser light absorbent substances are mixture of metal-oxide coated mica, SiO₂, anthracene or pentaerythritol (Par. 18-20). It

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would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Koops et al. the teaching of Delp et al. in order to have the energy absorber is selected from the groups of carbon, metal oxides, silicates, SiO₂ flakes, metal oxide-coated mica and/or SiO₂ flakes, conductive pigments, sulfides, phosphates, BiOCl, anthracene, perylenes, rylene, pentaerythritol, or mixtures thereof, for the purpose of enhancing the mixture of the light absorbent layer.

20. Regarding claim 6, Koops et al. discloses all the claimed features as set forth above except for the binder is selected from the group consisting of cellulose, cellulose derivatives, polyvinyl alcohols, polyvinylpyrrolidones, polyacrylates, polymethacrylates, epoxy resins, polyesters, polyethers, polyisobutylene, polyamide, polyvinylbutyrals and mixtures thereof in the manner recited in claim 6. Delp et al. teaches the laser-markable plastics where the mixtures of the binder consisting of polyamide, polyester, epoxy resins (Par. 30 and 32). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Koops et al. the teaching of Delp et al. in order to have the binder is selected from the group consisting of cellulose, cellulose derivatives, polyvinyl alcohols, polyvinylpyrrolidones, polyacrylates, polymethacrylates, epoxy resins, polyesters, polyethers, polyisobutylene, polyamide, polyvinylbutyrals and mixtures thereof, for the purpose of improving protection of the colorant component.

21. Regarding claim 10, Koops et al. discloses all the claimed features as set forth above except for the inscription medium comprises organic and/or inorganic colorants in the manner recited in claim 10. Delp et al. teaches the colored inscription and marking

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of plastic and surface coatings where the colorants for inscription are both organic and inorganic colorants (Par. 12-16). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Koops et al. the teaching of Delp et al. in order to use organic and/or inorganic colorants for pigments, for the purpose of improving the process of colored marking on the plastic surface.

22. Regarding claim 12, Koops et al. discloses all the claimed features as set forth above except for the plastics which have been laser-marked or laser-inscribed by the process according to claim 1 in the manner recited in claim 12. Delp et al. teaches the colored inscription and marking on the plastic surface by the colorant coating (Par. 9 and 36). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Koops et al. the teaching of Delp et al. in order to laser-marked or laser-inscribed on the plastic, for the purpose of inscribing information on the ID card.

23. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koops et al. (US Pat. 7,371,443) in view of Delp et al. (US Pub.2004/0013969) and further view of Raupach et al. (US Pub. 2005/0249938).

24. Regarding claim 4, the combined references disclose all the claimed features as set forth above except for the plastic layer comprises 0.01-20% by weight of energy absorber. Raupach et al. teaches the laser markable carrier unit where the laser sensitive layer (same as energy absorber) is from 0.05 to 10% by weight base on the support layer (same as plastic layer) (Par. 29). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in the combined

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references the teaching of Raupach et al. in order to have the plastic layer comprises 0.01-20% by weight of energy absorber, for the purpose of enabling the inner layer to be marked through the outer layers with out damaging the outer layer.

25. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koops et al. (US Pat. 7,371,443) in view of Delp et al. (US Pub.2004/0013969) and further view of Furukawa (US Pub. 2004/0218028).

26. Regarding claim 8, the combined references discloses the polymer components in particulate form of particles (Koops et al. Col. 6, Lines 51-57) except for the sizes of 10 nm – 100 μ m. Furukawa teaches the method for transferring a color image where the resin material (same as polymer components) in the size of 5–100 μ m. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in the combined references the teaching of Furukawa et al. in order to have the polymer component in particulate form has particle sizes of 10 nm-100 μ m, for the purpose of stably fixed the polymer.

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Knieb et al. (US Pub. 2001/0030179) discloses the laser-markable plastics. Suess et al. (US Pat. 5,985,78) discloses the method of producing marking on a surface by means of laser radiation and use of embossing foil in such a method. Heneghan et al. (US Pub. 2004/0152008) discloses the laser marking method.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG NGUYEN whose telephone number is (571)270-7828. The examiner can normally be reached on Monday-Friday, 8:30AM-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUNG NGUYEN/
Examiner, Art Unit 4118

/TU B HOANG/
Supervisory Patent Examiner, Art Unit 3742